

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003150 A3

(51) International Patent Classification⁷: A61K 31/7076. 31/70

(21) International Application Number: PCT/US2004/021387

(22) International Filing Date: 2 July 2004 (02.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/484,484 2 July 2003 (02.07.2003) US

(71) Applicant (for all designated States except US): EMORY UNIVERSITY [US/US]; 1380 South Oxford Road, N.E., Atlanta, GA 30322 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): VINTEN-JOHANSEN, Jakob [US/US]; 1550 Hillside Oak Drive, Grayson, GA 30017 (US).

(74) Agent: XIA, Tim, T; Morris, Manning & Martin LLP, 1600 Atlanta Financial Center, 3343 Peachtree Road, N.E., Atlanta, GA 30326-1044 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BE, BI, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BE, BI, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BE, BI, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

with international search report

before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 13 October 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/003150 A3

(54) Title: COMPOSITIONS AND METHODS FOR USE OF A PROTEASE INHIBITOR AND ADENOSINE FOR PREVENTING ORGAN ISCHEMIA AND REPERFUSION INJURY

(57) Abstract: Methods and compositions including combined use of a serine protease inhibitor and adenosine when administered as a single pharmaceutical composition, concomitantly or sequentially in any order to a living subject for preventing organ ischemia or reperfusion injury. The methods and compositions disclosed herein can be used in such procedures as cardiac surgery, non-surgical cardiac revascularization, organ transplantation, perfusion, ischemia, reperfusion, ischemia-reperfusion injury, oxidant injury, cytokine induced injury, shock induced injury, resuscitations injury or apoptosis.

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMISSION OF COPY OF INTERNATIONAL
APPLICATION AS PUBLISHED OR REPUBLISHED

To:

XIA, Tim, T.
Morris, Manning & Martin LLP
1600 Atlanta Financial Center
3343 Peachtree Road, N.E.
Atlanta, GA 30326-1044
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)
13 October 2005 (13.10.2005)

Applicant's or agent's file reference
14507-45204

IMPORTANT NOTICE

International application No.
PCT/US2004/021387

International filing date (day/month/year)
02 July 2004 (02.07.2004)

Priority date (day/month/year)
02 July 2003 (02.07.2003)

Applicant

EMORY UNIVERSITY et al

The International Bureau transmits herewith the following documents:

copy of the international application as published by the International Bureau on under
No. WO
 copy of international application as republished by the International Bureau on 13 October 2005 (13.10.2005) under
No. WO 2005/003150
For an explanation as to the reason for this republication of the international application, reference is made to INID codes (15), (48) or (88) (as the case may be) on the front page of the attached document.

10/25/05
BGS

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Beate Giffo-Schmitt

Faxsimile No. +41 22 740 14 35

Faxsimile No. +41 22 338 87 20

BEST AVAILABLE COPY

BEST AVAILABLE COPY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
APPLICATION AS PUBLISHED OR REPUBLISHED

To:

XIA, Tim, T.
 Morris, Manning & Martin LLP
 1600 Atlanta Financial Center
 3343 Peachtree Road, N.E.
 Atlanta, GA 30326-1044
 ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)
 13 January 2005 (13.01.2005)

Applicant's or agent's file reference
 14507-45204

IMPORTANT NOTICE

International application No.
 PCT/US2004/021387

International filing date (day/month/year)
 02 July 2004 (02.07.2004)

Priority date (day/month/year)
 02 July 2003 (02.07.2003)

Applicant

EMORY UNIVERSITY et al

The International Bureau transmits herewith the following documents:

copy of the international application as published by the International Bureau on 13 January 2005 (13.01.2005) under No. WO 2005/003150

copy of international application as republished by the International Bureau on under No. WO

For an explanation as to the reason for this republication of the international application, reference is made to INID codes (15), (48) or (88) (as the case may be) on the front page of the attached document.

RECEIVED

JAN 21 2005

MORRIS, MANNING & MARTIN

BEST AVAILABLE COPY

The International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland

Authorized officer

Beate Giffo-Schmitt
 124/205
 SVA

Facsimile No. +41 22 740 14 35

Facsimile No. +41 22 338 87 20

INTERNATIONAL SEARCH REPORT

Int'l

PCT/US04/21387

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : A61K 31/7076, 31/70 US CL : 514/46, 45, 43; 536/27.6 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/46, 45, 43; 536/27.6		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) STN Electronic Database		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STN ABSTRACT: ACCESSION NUMBER: 87293025 MEDLINE, DOCUMENT NUMBER: PubMed ID: 3303451 TITLE: Assessment of potential therapies for acute T-2 toxicosis in the rat. AUTHOR: Poppenga et al.; Toxicon : official journal of the International Society on Toxicology, (1987) 25 (5) 537-46 (see abstract).	4, 5
X	STN ABSTRACT: ACCESSION NO.: 1989:471310 CAPLUS, DOCUMENT NUMBER: 111:71310, TITLE: The effects of sprotinin on folicle-stimulating hormone binding and signal transduction in bovine calf testis. AUTHOR: Grasso et al., Endocrinology (1989), 125 (1), 117-25.	21, 22
Y	STN ABSTRACT: ACCESSION NO: 2002 303480 CAPLUS DOCUMENT NO: 138:66369 TITLE: LEX032, A Novel Recombinant Scirpin, Protects the Brain after Transient Focal Ischemia , AUTHOR(S): Weaver et al., Microvascular Research (2002), 63 (3), 237-334, see abstract.	1-3, 7-17
A		18-34
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents "A" document defining the general state of the art which is not considered to be of particular relevance "B" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
Date of the actual completion of the international search		Date of mailing of the international search report
05 August 2005 (05.08.2005)		24 AUG 2005
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer <i>Michael C. Henry</i> Michael C. Henry Telephone No. 703 308-1235

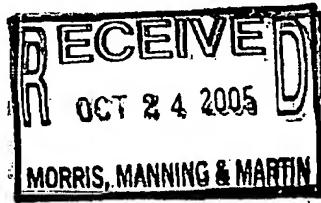
BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/21387

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	STN ABSTRACT: ACCESSION NO: 2000178187 MEDLINE DOCUMENT NUMBER: PubMed ID: 10710542 TITLE: Protective effects of renal ischemic preconditioning and adenosine pretreatment: role of A(1) and A(3) receptors. AUTHOR: Lee et al., American Journal of Physiology. Renal Physiology, (2000 March) 278 (3) F380-7, see abstract.	1-3, 7-17
A		6, 18-34



BEST AVAILABLE COPY